Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	
Amendment of Parts 2 and 15 of the Commission's Rules to Deregulate the Equipment Authorization Requirements for Digital Devices	ET Docket No. 95-19

COMMENTS

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SUMMARY

AT&T supports the proposal in the NPRM to replace the current certification procedure for personal computers and personal computer peripherals with a Declaration of Conformity ("DoC"). The DoC procedure should prove more efficient than Commission processing of certification applications, and thus should benefit suppliers and consumers by allowing new products to reach the marketplace more rapidly.

On the other hand, AT&T opposes the proposal to request accreditation of laboratories performing emissions testing for personal computers. Because certified personal computers, tested today by unaccredited laboratories, do not cause harmful interference, there is no reason to impose a costly and burdensome accreditation procedure.

AT&T supports authorizing appropriately tested modular personal computer components. At this time the Commission should adopt rules permitting such components to be used in existing authorized personal computers, without testing the end item. However, assembly of new personal computers from authorized components should not be permitted until there are reliable data showing that such combinations will comply with the emissions limits.

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COMMENTS

AT&T Corp. ("AT&T") respectfully submits the following comments in response to the Commission's Notice of Proposed Rulemaking ("NPRM"), FCC 95-46, released February 7, 1995.

I. INTRODUCTION

The Commission proposes to amend its rules to provide for authorizing personal computers and personal computer peripherals by means of a Declaration of Conformity ("DoC") executed by the manufacturer or supplier (NPRM, ¶ 6) and to require emissions testing by a laboratory accredited under the National Voluntary Laboratory Accreditation Program ("NVLAP") operated by the National Institute of Standards and Technology ("NIST") (NPRM, ¶ 8). The DoC

procedure would replace the current certification procedure[1] under which the applicant submits representations and test data to the Commission, which thereafter issues a grant of authorization.[2] AT&T supports replacing certification with a DoC because that proposal eliminates Commission processing and thus permits new products to reach the market more rapidly. However, AT&T opposes the requirement for NVLAP (or other) accreditation of laboratories testing personal computers for compliance with the Commission's emission limits.[3] The NPRM does not demonstrate the need for such a program sufficient to outweigh the problems it would cause, and AT&T believes there is no such need.

The Commission also proposes to require authorization of all personal computer Central Processing Unit ("CPU") boards, power supplies and enclosures marketed to the public (NPRM, ¶ 17).[4] The proposed test procedures for these three components are contained in paragraphs 20-22

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[1] 47 CFR § 15.101(a) establishes certification as the procedure for authorizing personal computers and personal computer peripherals.

[2] 47 CFR § 2.907(a).

[3] The NPRM properly does not propose any change in the Commission's practice of publishing a list of laboratories that have filed a test site description and are willing to perform measurements on a contract basis (See NPRM, ¶ 3).

[4] A DoC would be the authorization method for these components if adopted in this proceeding for the personal

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of the NPRM. Moreover, the Commission proposes to allow anyone to create personal computers using these components and to substitute these components in existing personal computers (NPRM, ¶ 18), all without testing the resulting final product. AT&T supports the concept of authorizing personal computer components to create some flexibility to modify existing personal computers. But AT&T opposes other aspects of the Commission's proposal because the three specific testing procedures proposed in the NPRM and the proposal to allow combinations without testing the end item pose unacceptable risks of harmful interference to other users of the radio spectrum.

II. THE COMMISSION SHOULD SUBSTITUTE A SUPPLIER'S DECLARATION OF CONFORMITY FOR THE CURRENT CERTIFICATION PROCESS.

As the NPRM notes (¶ 4), replacing certification of personal computers and peripherals with a DoC will eliminate the delay caused by the certification process, a delay that can represent a significant portion of the increasingly shorter market life for that equipment. The proposed DoC process affords assurance of compliance with

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computers themselves. Otherwise, whatever other authorization procedure emerges from this proceeding would apply (NPRM, n. 20).

the emissions limits comparable to that of the certification process. Therefore, the Commission should institute a DoC process in place of certification.

Indeed, the assurance of compliance under the proposed DoC process may be superior than that of the present verification process, because compliance can be more readily tracked and enforced. As the NPRM notes (id.), the DoC procedure arms the consumer with four items of information (NPRM, ¶ 16), while verification does not, specifically, the name and model number of the unit; a statement that the device complies with Part 15; an identification of the test report by date and number;[5] and the name, address and telephone number of the person in the United States responsible for insuring compliance.[6] This data will arm the consumer with information bearing on compliance and will help the consumer, and if necessary the Commission, to resolve claims of harmful interference.[7]

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[5] This will aid the Commission in the event it elects to demand the test report, as the DoC process permits (NPRM, ¶ 16).

[6] AT&T suggests that this item instead require the name, address and telephone number of the manufacturer and, if the manufacturer is not located in the United States, also the name, address and telephone number of the importer or other responsible United States party. The manufacturer, of course, is the party causing the non-compliance.

[7] Compliance will be further aided by requiring a label containing only a symbol: words would complicate

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The Commission also requests comments on other alternatives to the proposed DoC process (NPRM, ¶ 13). One such alternative is streamlining the current certification process to reduce the processing time. This alternative does not provide the same benefits to suppliers and users as the DoC proposal, which eliminates Commission processing entirely. Another suggested alternative is keeping certification but permitting marketing as soon as the application is filed rather than only after it is granted. This approach requires unnecessary paper work if the device in fact complies with the rules and a grant of certification is eventually issued. On the other hand, if the application does not result in a grant, non-complying equipment reaches the market and is beyond practical recall.

III. THE COMMISSION SHOULD NOT MANDATE LABORATORY ACCREDITATION.

AT&T opposes any Commission-required laboratory accreditation program as part of the process for authorizing personal computers because there is no evidence supporting the necessity thereof.[8] Today the Commission issues

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offering a uniform product in countries using different languages (See NPRM, ¶ 7).

[8] The Commission should, however, retain its existing site registration program, which identifies laboratory

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certifications of those devices based on test reports from laboratories not subject to any accreditation program. It appears quite rare that a personal computer interferes with other uses of the radio spectrum because it did not in fact comply with the rules despite test reports showing compliance.[9] The manufacturer's expertise and interest in its reputation and credibility, together with the enforcement mechanisms in the Commission's rules, which would also apply to the DoC process, have been sufficient to ensure that the test reports recite the actual emissions.[10] It thus appears that any non-compliance with the emission limits for personal computers arises from a lack of testing to discover inadequacies in design or production, not from inadequate testing.

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facilities that are capable of making accurate measurements (§ 2.948(a) and (b)).

[9] In October, 1994 Commission personnel informed CBEMA (now ITI) that the Commission received only one complaint about interference from a certified personal computer during that year.

[10] The Commission can require the grantee of an equipment authorization to investigate complaints of non-compliance and report back to the Commission, including with steps to correct the problem (47 C.F.R. § 2.937) and can require the grantee to furnish the authorized device itself and related documentation to the Commission (47 C.F.R. § 2.936).

Beyond being unnecessary, an accreditation program will cause substantial delay in achieving the benefits of the relaxed regulation proposed in the NPRM. The Commission proposes a two-year period in which there is an "option" to obtain certification rather than use the DoC process. But if there is insufficient accredited laboratory capacity, the personal computer manufacturer may have no choice other than certification. On the other hand, absent the accreditation requirement, the DoC process could be available within 30 days after Federal Register publication of the new rule.

An additional problem, pointed out by the Commission, is that there is only one NVLAP accredited laboratory for this purpose outside the United States (NPRM, ¶ 5). The Commission's suggested solution (id.), that NIST could negotiate agreements under which its foreign counterparts could perform the accreditation, would likely take a substantial amount of time to implement. In this connection, contrary to the assumption in the NPRM, there are no foreign countries that require laboratory accreditation for emissions testing of personal computers. In this situation, a United States accreditation requirement, particularly one that cannot be met by foreign manufacturers on a timely and convenient basis, could serve to erect unintended and inappropriate barriers for foreign manufacturers.

Instead of a mandatory accreditation program, AT&T suggests that the emissions test report which the manufacturer retains and can make available to the Commission could, on a voluntary basis, contain information about the competence of the laboratory performing the tests. Then, should there be any need to investigate the compliance of the device with the applicable emission limits, the extent and depth of that investigation could be influenced by the existence and quality of the information on the competence of the laboratory.[11]

IV. AT&T SUPPORTS AUTHORIZING MODULAR COMPONENTS UNDER APPROPRIATE RULES GOVERNING THE AUTHORIZATION PROCESS AND THE USE OF SUCH COMPONENTS.

AT&T would support a soundly conceived set of Commission rules providing for authorization of components used in personal computers and peripherals and permitting using such components to modify existing personal computers or create new ones. But the specifics of the proposals in the NPRM fall short of what is needed to protect against harmful interference to other users of the radio spectrum.[12]

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[11] The Class B standard test report form developed by the Commission staff and CBEMA (now ITI) and widely used could be expanded to call for information on the qualifications of the testing laboratory.

[12] As the NPRM notes (¶ 15), these issues were explored in GEN Docket No. 90-413, with no industry consensus in support of the Commission's proposal. The Commission

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The Commission proposes to provide for separate authorization of CPU boards, power supplies and enclosures marketed to the public, pursuant to test procedures specified, respectively, in paragraphs 20, 21 and 22 of the NPRM. These authorized components could be substituted for the components in an existing authorized personal computer or peripheral or they could be combined into a new device. In neither instance would testing of the new end product for compliance with the emission limits be required.[13]

It is true that the Commission now recognizes that "no measurement procedure can provide complete assurance of compliance for all possible combinations of personal computer components"[14] (NPRM, ¶ 19). Rather, the Commission intends rules which "will insure compliance under most conditions," so that there is only a "small risk" of non-compliance by untested combinations of components (id.).

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terminated that proceeding because the record therein "is now stale due to several changes that have occurred (id.)," but makes quite similar proposals in the current proceeding. Recent changes in the technology do not obviate the concerns expressed in the prior proceeding.

[13] The Commission does not propose to change the present limits.

[14] The record in the terminated GEN Docket 90-413 contained extensive support for this proposition.

Unfortunately, the Commission's approach of separate modular component testing procedures does not provide reasonable assurance that a modified or new device containing one or more of an authorized CPU board, power supply and enclosure indeed complies with the emission limits. Moreover, the Commission's proposal ignores the impact on the emission's profile of the modular computer by components other than the three to which the new rules would apply.

Permitting use of a CPU board that exceeds the radiated emission limits by any amount, such as 6dB as suggested in the NPRM (¶ 20), when tested without an enclosure, is unsound. The other components needed to make a complete system cause an increase in emissions. Starting with a CPU board that is itself over the limit by any amount, much less by 6dB, affords little hope that the system will comply, especially since there is no guarantee that the enclosure will provide any shielding. Moreover, the established technique of applying a metal coating to a plastic enclosure to improve shielding capability will likely be less used in the future because it bars recycling the plastic.

The Commission's belief that other configurations using a power supply tested in one typical configuration will also comply (NPRM, ¶ 21) is not always correct. AT&T

has found that new systems using components, including power supplies, tested and passed in a different system, may exceed the emission levels by 10dB or even 20dB, necessitating mitigation measures. Therefore, the Commission should provide a margin of safety by requiring that the typical configuration in which the power supply is tested have no shielding effectiveness.

The Commission recognizes the complexity of testing enclosures and proposes a "pragmatic approach" requiring that the enclosure provide 6dB of shielding across the spectrum from 30MHz to 1000MHz and that the DoC for the enclosure should specify the types of CPU boards with which it can be used (NPRM, ¶ 22). The Commission's approach, however, does not afford even reasonable assurance that a system using such an enclosure will indeed comply with the emissions limits. Because the existence of seams, slots and penetrations in the enclosure and the placement of components and modules within the enclosure all affect shielding capability, there is no practical way to determine the effectiveness of an enclosure to shield emissions from within it.

The proposal in the NPRM also ignores that the latest generation of computers frequently also contains such things as multiple floppy disc drives, a graphics interface board, a TV tuner board, a CD ROM, audio and video

processors for multi-media applications, a fax modem, scanners and video game cards, all of which affect the emissions profile of the system. Additional modules will surely be added as the capability of the personal computer continues to increase. Ignoring the emissions impact of these components creates a risk that systems containing them will exceed the limits. Therefore, the Commission should adopt separate tests for all such components, requiring compliance with existing limits in a typical system, but with no shielding effectiveness.

This approach would not guarantee that the system complies with the emission limits. It would, however, offer better assurance of component substitutability than the present regime under which components are not authorized at all. Therefore, AT&T supports allowing manufacturers to market authorized components for use in types of authorized systems identified in the marketing materials. That identification should be based on testing one or more representative modified units of each such type to make it reasonable to expect that almost all, if not all, units comply.[15] The fact that an authorized personal computer is the starting point of this substitution process provides

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[15] The manufacturer's testing burden thus depends on how broadly it wishes to represent that substitution is permitted.

additional likelihood that the modified unit complies. Consumers will thus be able to purchase components to upgrade their equipment while the upgraded equipment should not cause harmful interference.

The Commission proposes an approach along this line for enclosures. Recognizing that an enclosure could shield emissions from a "486" processor, but not a Pentium processor, the Commission proposes that the DoC for the enclosures specify the particular type of CPU board for which it is authorized (NPRM, ¶ 22). Without regard to whether the Commission's particular example of such a specification (id.) is sufficiently definite, this principle should apply to the marketing of all components.

On the other hand, assembly of personal computers out of authorized components should not be allowed at this time. Absent development of tests for authorizing all components and the gathering of empirical data on the emissions produced by an adequate sample of combinations of authorized components, all personal computers should continue to be authorized based on establishing that they meet the emissions limits. If these data establish that combinations of authorized components are indeed highly likely to comply with the emission limits, assembly of personal computers out of such components should be permitted.

Finally, the Commission properly proposes to permit component manufacturers to sell non-authorized components to other manufacturers for further fabrication and to provide limited quantities of such components for testing, evaluation or product development purposes (NPRM, ¶ 25). The related proposal to amend the importation rules to provide that the consignee of non-authorized components must be a manufacturer responsible for testing and authorizing the computer (id.), ignores that the consignee may use the components in exempt devices[16] and thus have no testing and authorization obligations. Instead, AT&T proposes that manufacturers be allowed to import components if they represent that they will use them in compliance with the Commission's Rules.[17]

CONCLUSION

The proposed DoC procedure is an appropriate step toward elimination of unnecessary regulation. On the other hand, the proposed mandatory laboratory accreditation procedure creates needless additional burdens on manufacturers and therefore should not be adopted. Modular component rules as suggested by AT&T should be adopted in

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[16] Exempt devices are identified in 47 C.F.R. § 15.103.

[17] Form 740 should be revised to deal with this situation.

the near term and further liberalization may be appropriate thereafter if factual support is developed. However, Commission revisiting of modular component issues should not delay implementation of the DoC proposal.

Respectfully submitted,

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